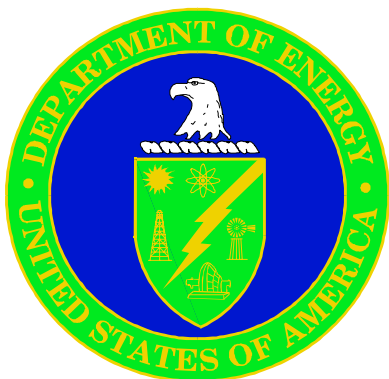

Strategic Petroleum Reserve

Annual Report for Calendar Year 1999



U.S. Department of Energy
Assistant Secretary for Fossil Energy
Office of Strategic Petroleum Reserve
Washington, D.C. 20585

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EXECUTIVE SUMMARY

ROYALTY-IN-KIND OIL

The Secretary of Energy, Bill Richardson, announced on March 31, 1999, that the Department of Energy and the Department of the Interior completed arrangements with Texaco, Shell and BP-Amoco for the shipment of approximately 38,000 barrels per day of royalty-in-kind oil to the Strategic Petroleum Reserve. This was the initial phase of a program announced February 11, 1999, to replace approximately 28 million barrels of oil sold from the Strategic Petroleum Reserve. The second phase involved a competitive bid process to transfer additional quantities of royalty oil in satisfaction of the 28 million-barrel target.

LEGISLATION

On October 5, 1999, the President signed Public Law 106-64 to extend authorities in the Energy Policy and Conservation Act for the Strategic Petroleum Reserve and United States participation in the International Energy Agency program until March 31, 2000.

Appendix C of the Consolidated Appropriations Act, 2000 (Public Law 106-113) was enacted on November 29, 1999, and includes \$159 million for the Strategic Petroleum Reserve.

FACILITIES LIFE EXTENSION

A Life Extension Program to ensure continued mission readiness through 2025 was initiated in 1994. Most major systems will be upgraded or replaced by 2000, and newer technologies will increase reliability and reduce operating and maintenance costs. Major construction is near completion at Bryan Mound and West Hackberry and is in a final stage at Big Hill and Bayou Choctaw.

WEEKS ISLAND DECOMMISSIONING

The State of Louisiana agreed to the closing of Weeks Island on September 3, 1999, and the Environmental Protection Agency concurred on November 2, 1999. The surface facilities will be salvaged, removed or abandoned in place, and the site will be transferred to the General Services Administration for disposition.

CRUDE OIL INVENTORY

As of December 31, 1999, the crude oil inventory in the Strategic Petroleum Reserve was 567 million barrels.

PROGRAM MISSION

INTRODUCTION

The Strategic Petroleum Reserve was established in 1975 in response to the 1973 Arab oil embargo. It is authorized by the Energy Policy and Conservation Act (EPCA) (Public Law 94-163), and by the comprehensive energy plans of all Administrations since 1975, in recognition of the long-term dependence of the United States on imported crude oil and petroleum product. Section 165 of EPCA requires the Secretary of Energy to submit an Annual Report to the President and the Congress.

As of December 31, 1999, the crude oil inventory in the Strategic Petroleum Reserve was 567 million barrels. The current inventory amounted to 58 days of net imports in 1999, and is down from a peak of 592 million barrels in 1994. The United States relies on a combination of oil in the Strategic Petroleum Reserve and private stocks to meet its oil storage obligations to the International Energy Agency.

LEGISLATIVE HISTORY

The Strategic Petroleum Reserve was authorized on December 22, 1975, when Congress enacted the EPCA (Public Law 94-163), to reduce the impact of a severe energy supply interruption, and to carry out the obligations of the United States under the International Energy Program.

EPCA was amended by Title VIII of the Energy Security Act (Public Law 96-294), enacted on June 30, 1980. The Act established a minimum average daily fill rate of 100,000 barrels and precluded the sale of Naval Petroleum Reserve Numbered 1 (Elk Hills, California) crude oil except to fill the Strategic Petroleum Reserve, unless the Reserve was being filled at the minimum rate or had an inventory of 500 million barrels.

The Energy Policy and Conservation Amendments Act of 1985 (Public Law 99-58), enacted on July 2, 1985, extended the provisions of Title I, Part B, of the EPCA relating to the Strategic Petroleum Reserve until June 30, 1989, and directed the Secretary of Energy to conduct a sale or exchange of 1.1 million barrels of crude oil to test the drawdown and distribution capabilities of the Strategic Petroleum Reserve.

The Omnibus Budget Reconciliation Act of 1986 (Public Law 99-509), enacted on October 21, 1986, amended EPCA to require that the Strategic Petroleum Reserve be filled to 750 million barrels, and increased the minimum rate under the Naval Petroleum Reserve limitation to 75,000 barrels a day.

Public Law 101-46, an Act to extend Title I of EPCA, enacted on June 30, 1989, extended Strategic Petroleum Reserve authorities contained in EPCA until April 1, 1990. The Act also required the Secretary to submit a report to Congress by February 1, 1990, on alternative means of financing oil acquisition for the Strategic Petroleum Reserve. Short term extensions of the Strategic Petroleum Reserve authorities contained in EPCA were enacted on March 31, 1990 (Public Law 101-262), and August 10, 1990 (Public Law 101-360).

On September 15, 1990, the President signed the Energy Policy and Conservation Act Amendments of 1990 (Public Law 101-383) extending authorities until September 30, 1994. This legislation also contained provisions to amend drawdown authorities, require a Strategic Petroleum Reserve Plan Amendment for completion of storage capacity for one billion barrels, authorize drawdown and distribution tests, and provide for a refined petroleum product reserve test program.

On October 24, 1992, the President signed the Energy Policy Act of 1992 (Public Law 102-486). The bill included provisions to (1) add new conditions for drawdown in emergency situations involving a supply reduction of significant scope and duration, coupled with a severe price increase likely to cause a major adverse impact on the nation's economy, (2) enlarge the Reserve to one billion barrels, (3) permit the Secretary to make payment in advance for delivery of petroleum product either owned or not owned by the United States for storage in the Strategic Petroleum Reserve or non-Strategic Petroleum Reserve facilities, (4) give the President discretionary authority to acquire domestic stripper well oil at competitive prices to fill the Reserve, and (5) amend the eligibility criteria for a Regional Petroleum Reserve.

On October 22, 1994, the President signed into law the Energy Policy and Conservation Act Amendments Act of 1994 (Public Law 103-406) which extended authorities to June 30, 1996.

The Balanced Budget Downpayment Act (Public Law 104-99) was enacted on January 26, 1996, and required the sale of up to \$100 million of Weeks Island oil to fund decommissioning activities.

The Omnibus Consolidated Rescissions and Appropriations Act of 1996 (Public Law 104-134) was enacted on April 26, 1996, and required the sale of \$227 million of Weeks Island oil for deficit reduction.

The Omnibus Consolidated Appropriations Act (Public Law 104-208) was enacted on September 30, 1996, and appropriated \$220 million for the Strategic Petroleum Reserve in fiscal year 1997 to be financed through the sale of oil. The Strategic Petroleum Reserve authorities expired on June 30, 1996. On October 14, 1996, Public Law 104-306 extended the Strategic Petroleum Reserve authorities until September 30, 1997. After the expiration of Strategic Petroleum Reserve

authorities on September 30, 1997, these authorities were not reauthorized until June 1998. The Balanced Budget Act of 1997 (Public Law 105-33), enacted August 5, 1997, added a new section 168 to EPCA, authorizing the leasing of underutilized Strategic Petroleum Reserve facilities for the storage of oil owned by a foreign government or its representatives.

The Department of the Interior and Related Agencies Appropriations Act, 1998 (Public Law 105-83) was enacted on November 14, 1997, and appropriated \$207.5 million for the Strategic Petroleum Reserve in fiscal year 1998 to be financed through the sale of Reserve oil.

The 1998 Supplemental Appropriations and Rescissions Act (Public Law 105-174) was enacted on May 1, 1998 and included a provision which prohibited the sale of Strategic Petroleum Reserve oil, contingent upon a Presidential determination that a sale would be imprudent in light of current market conditions and a designation of the \$207.5 million in foregone revenue as an emergency requirement under the Balanced Budget Act of 1985. The President made the requisite determination and declaration on May 8, 1998.

On June 1, 1998, the President signed Public Law 105-177 to extend certain EPCA programs. The Act extended authorities for the Strategic Petroleum Reserve and participation in the International Energy Program through September 30, 1999, and expanded the antitrust protection for U.S. companies participating in International Energy Agency activities. The Act also authorized the drawdown and distribution of the Strategic Petroleum Reserve only for the purposes described in the Act and required that the Secretary of Energy request funds for acquisition, transportation and injection of petroleum products for storage in the Reserve or provide a written explanation if no request for funds is made. The Omnibus Consolidated and Emergency Supplemental Appropriations Act, 1999 (Public Law 105-277)

was enacted on October 21, 1998, and included \$160.1 million for the Strategic Petroleum Reserve.

On November 13, 1998, the President signed Public Law 105-388, an Act to extend energy conservation programs under the Energy Policy and Conservation Act and the Energy Conservation and Production Act, and for other purposes. The Act provides that, during a drawdown of the Strategic Petroleum Reserve, the State of Hawaii may submit a binding offer for Strategic Petroleum Reserve oil and be entitled to purchase the oil at a price equal to the weighted average price of the successful competitive bids for oil in the applicable category. Tankers destined for Hawaii would receive priority scheduling during a Strategic Petroleum Reserve drawdown.

The Strategic Petroleum Reserve authorities expired on September 30, 1999. On October 5, 1999, the President signed Public Law 106-64, extending these and the EPCA authorities for United States participation in the International Energy Agency program until March 31, 2000.

Appendix C of the Consolidated Appropriations Act, 2000 (Public Law 106-113), enacted on November 29, 1999, includes \$159 million for the Strategic Petroleum Reserve. The Act also allows the Secretary to use other Departmental funds to finance a drawdown of the Strategic Petroleum Reserve.

**STRATEGIC PETROLEUM RESERVE PLAN
AND AMENDMENTS**

Section 154 of EPCA required the preparation of a Strategic Petroleum Reserve Plan to address the development and implementation of the Strategic Petroleum Reserve. A Plan was submitted to the Congress on February 16, 1977, and became effective on April 18, 1977. The Plan has been amended five times, and was last amended on February 11, 1999.

Strategic Petroleum Reserve Plan Amendment No. 1 accelerated the planned schedule for filling the Reserve. Amendment No. 2 to the Strategic Petroleum Reserve Plan authorized an increase in the Strategic Petroleum Reserve size from 500 million barrels to one billion barrels. The Amendment described Department of Energy plans to store 750 million barrels of petroleum in underground storage facilities.

On October 31, 1979, the Department of Energy submitted Amendment No. 3, a Distribution Plan for the Strategic Petroleum Reserve, to the

Congress. The Distribution Plan described the methods for drawdown and distribution of petroleum from the five existing Strategic Petroleum Reserve storage sites.

On December 1, 1982, the President transmitted Amendment No. 4, a new Drawdown Plan, to the Congress for the use of the Strategic Petroleum Reserve. This Plan, required under the Energy Emergency Preparedness Act of 1982, went into effect immediately and provides procedures for the drawdown, sale, and distribution of petroleum from the Strategic Petroleum Reserve. The Drawdown Plan replaces the Distribution Plan established by Amendment 3.

Finally, Amendment No. 5 provides specifically for the Strategic Petroleum Reserve to acquire crude oil that the United States is entitled to receive in-kind as royalties from production on Federal lands under subsection 160(a)(2) of EPCA. Plan Amendment No. 5 was transmitted by the Secretary to Congress on February 11, 1999, and became effective on April 12, 1999.

PROGRAM MANAGEMENT

ORGANIZATION

The Assistant Secretary for the Office of Fossil Energy in Washington D.C. has overall program responsibility for achieving the goals and objectives of the Strategic Petroleum Reserve.

This responsibility is delegated to the Deputy Assistant Secretary for the Petroleum Reserves, Mr. Richard D. Furiga, and is exercised through the Strategic Petroleum Reserve headquarters in Washington, D.C., and the Project Management Office, located in New Orleans, Louisiana.

The Project Management office is under the direction of Mr. William C. Gibson, Jr., the Project Manager and is responsible for project management and implementation activities associated with the design, development, operation and maintenance of the Strategic Petroleum Reserve.

The Project Management Office executes its responsibilities by employing a Management and Operating contractor, DynMcDermott Petroleum Operations Company, to provide the operations, maintenance, and ancillary services associated with the operation of the Strategic Petroleum Reserve's oil storage and distribution facilities.

Other major contractors include: Walk, Haydel & Associates, for architect-engineering services;

Critique, Inc. for management-technical support services; Entergy Services Inc. and Houston Lighting & Power Company for electrical power; Seaway Pipeline Company, Sun Pipe Line Company, and Union Oil Co. of California for terminalling and distribution services; and D.L.Meacham for construction; Fisher-Rosemount Systems for control systems; and SERNA & Company for auditing services.

STRATEGIC PLAN

The Strategic Plan for the Strategic Petroleum Reserve is updated annually. A strategic planning working group consists of the Program Office in Washington, D.C. and the Project Management Office in New Orleans.

PERFORMANCE MEASUREMENT SYSTEM

The Strategic Petroleum Reserve has incorporated all of the mandates of the Government Performance and Results Act (GPRA) of 1993 into its performance management system. Results for 1999 are detailed on page 32.

ORGANIZATIONAL AND QUALITY IMPROVEMENT

These activities are an integral part of our drive for total quality management and are described in more detail on page 34.

STORAGE PROGRAM

STORAGE PROGRAM AND DRAWDOWN GOAL

The Strategic Petroleum Reserve developed six underground storage facilities, between 1976 and 1991. The Sulphur Mines site in Louisiana was decommissioned in 1992 for cost savings, and the Weeks Island site, also in Louisiana, was decommissioned in 1999 as a result of geotechnical problems. The remaining four sites are Bryan Mound and Big Hill, Texas, and West

Hackberry and Bayou Choctaw, Louisiana. Table 1 summarizes storage capacity and drawdown capability of the sites as of December 31, 1999.

The four sites are organized into three distribution systems: Seaway, Texoma and Capline. Within each system, the storage facilities can access the Gulf Coast refining centers, interstate crude oil pipelines, and one or more marine terminals for distribution of crude oil. Figure 1 shows this distribution configuration.

TABLE 1
STORAGE CAPACITY AND DRAWDOWN GOAL
(December 31, 1999)

Storage Facility	Storage Capacity (MMB)	Crude Mix Sweet/Sour (MMB)	Drawdown Capability (MB/D)
Bryan Mound	232	75/157	1,500
West Hackberry	222	114/108	1,300
Big Hill	170	72/98	1,100*
Bayou Choctaw	76	24/52	515
Total	700	285/415 40%/60%	4,415

* Drawdown capability to be achieved by March 2000.

Legend:

MMB = Million Barrels

MB/D = Thousands Barrels Per Day

FIGURE 1
STORAGE SITES AND DISTRIBUTION SYSTEM



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Decommissioning Weeks Island resulted in a loss of 70 million barrels of capacity, reducing overall storage capacity to 680 million barrels. However, the Department reassessed the capacities of the remaining storage sites and estimated them to be currently capable of storing 700 million barrels because of fresh water leaching in the caverns during the drawdown of oil in previous years (Desert Storm drawdown activities, 1995 oil sales, 1996 and 1997 oil degassing and various site drawdown tests). As reported in the past two years, the Department minimized the loss of Weeks Island drawdown capability by increasing the capabilities of the remaining sites under the current Life Extension Program.

STORAGE FACILITIES LIFE EXTENSION PROGRAM

A Life Extension Program was initiated in 1994 to upgrade or replace major systems by 2000, and ensure mission readiness through 2025. The program uses new technologies to increase reliability and reduce operating and maintenance costs.

As of December 31, 1999, approximately 96 percent of life extension projects were completed, based upon contract obligations. Major construction was essentially completed at Bryan Mound and West Hackberry, and was in the final stages at Big Hill and Bayou Choctaw. Contracts were awarded in the amount of \$2.7 million for site work and clean-up at Big Hill and Bayou Choctaw. Testing of oil, water, and brine systems continued at all sites.

The total estimated cost of the Life Extension Program is \$328 million, \$42 million less than the original estimate of \$370 million. The cancellation of planned projects for Weeks Island and St. James Terminal (leased to Equilon Pipeline Corporation), and comprehensive value engineering efforts, resulted in the cost reductions. Approximately

\$316 million has been obligated for life extension projects since 1994.

Figure 2 graphs the history of the Life Extension Program, including total estimated cost, annual budgets, and total obligations from 1994 to date.

STATUS OF LIFE EXTENSION PROJECTS

BRYAN MOUND

The Bryan Mound storage facility in Brazoria County, is approximately three miles southwest of Freeport, Texas. The site has 20 storage caverns, a combined storage capacity of 232 million barrels, and an inventory of 215 million barrels. The site is available for both fill and drawdown operations.

The following projects were completed in 1999:

- ▶ Construction to upgrade the site's crude oil refill and metering systems.
- ▶ Replacement of the slop oil system and closing of the existing brine pond.

Construction is essentially complete. Remaining work includes site clean-up and system testing.

WEST HACKBERRY

The West Hackberry storage facility in Cameron Parish is approximately 22 miles southwest of Lake Charles, Louisiana. The site has 22 storage caverns, a combined storage capacity of 222 million barrels and an inventory of 193 million barrels. It is available for both fill and drawdown operations.

The following projects were completed in 1999:

- ▶ Replacement of the brine handling system and brine pond.

- Upgrading of the crude oil refill and metering systems, and closing of the existing brine pond.

Construction is essentially complete. Remaining work includes site clean-up and system testing.

BAYOU CHOCTAW

The Bayou Choctaw storage facility in Iberville Parish is approximately 12 miles southwest of Baton Rouge, Louisiana. The site has six storage caverns, a combined storage capacity of 76 million barrels, and an inventory of 72 million barrels. The site is currently available for both fill and drawdown operations.

Construction to upgrade most of the major systems at Bayou Choctaw, including instrumentation and controls, piping reconfiguration, electrical system, valves and new water intake pumps, was completed in May 1999.

The crude oil system is being modified to tie it into a new Equilon pipeline connected to refineries at Baton Rouge. When completed in early 2000, offsite distribution will improve. Other remaining work includes site clean-up and system testing.

BIG HILL

The Big Hill storage facility in Jefferson County is 20 miles southwest of Beaumont, Texas. The site has 14 storage caverns, a combined storage capacity of 170 million barrels, and an inventory of 85 million barrels. The site is currently available for both fill and drawdown operations.

Construction to upgrade most of the major systems at Big Hill, including instrumentation and controls, piping configuration, electrical system, valves and oil pumps, was completed in September 1999. Demolition of obsolete equipment is scheduled for completion during the early part of 2000. Other remaining work includes site clean-up and system testing.

STATUS OF WEEKS ISLAND DECOMMISSIONING

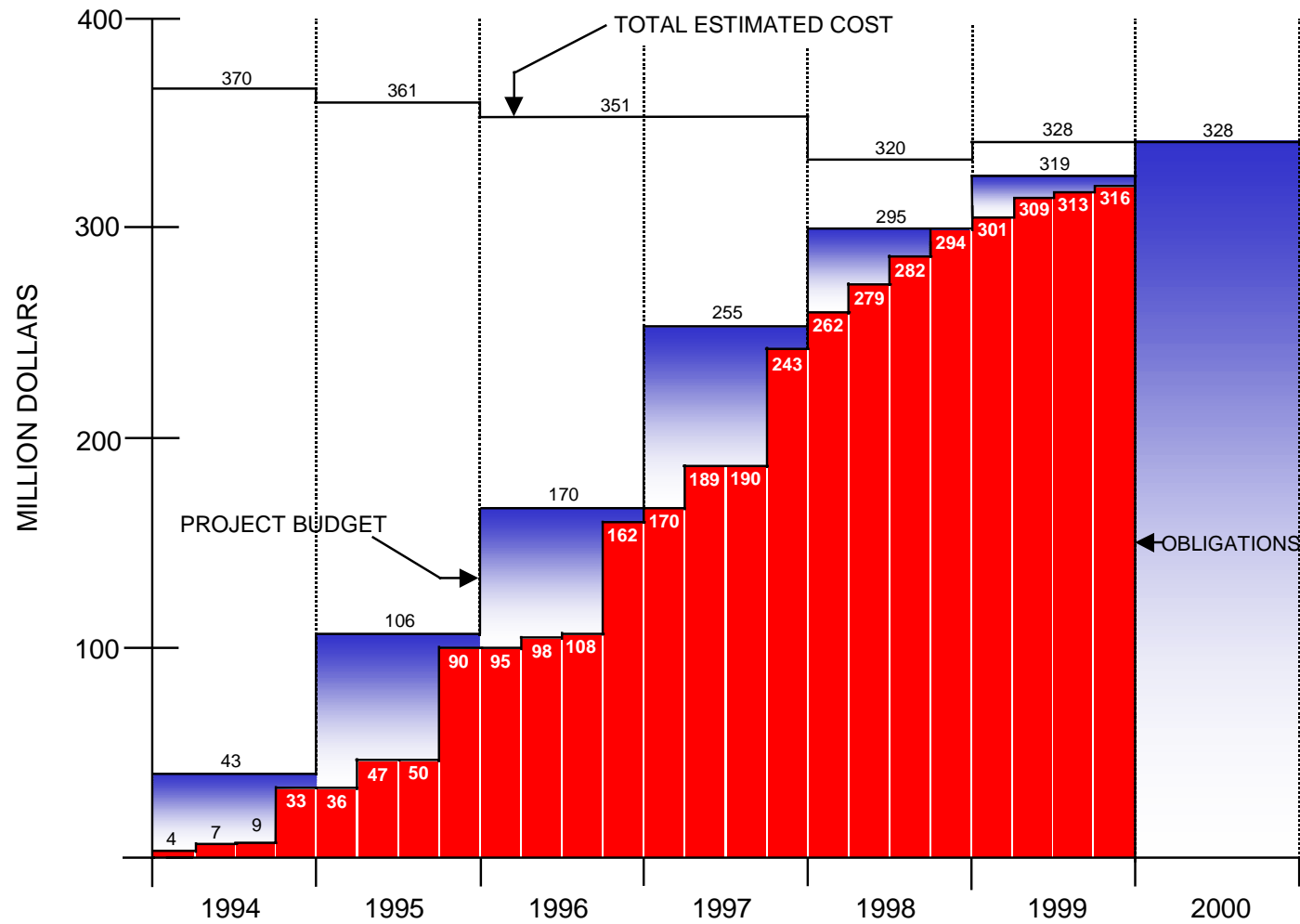
The Weeks Island site is located in Iberia Parish, approximately 95 miles southwest of New Orleans, Louisiana. This site was acquired in 1977 as a conventional salt mine and converted to an oil storage facility with a capacity of over 70 million barrels.

In December 1994, the Secretary of Energy announced the site's decommissioning. Technical problems posed a high risk of environmental damage and oil loss. This process began during 1995 and 1996 when most of the site's approximately 72 million barrel inventory was sold, or transferred to other sites. It involved removing the stored oil, filling the mine with brine to maintain stability, and skimming the remaining oil from the surface of the brine.

The 1997 oil skimming operation recovered over two million barrels of oil, leaving only oil that could not be recovered because of entrapment in the large volume of crushed salt residing on the mine floor, and in traps along the roof.

Major decommissioning activities ended on November 4, 1999, when the service and production shaft was demolished. The State of Louisiana agreed to the mine closure on September 3, 1999, and the Environmental Protection Agency concurred on November 2, 1999. The surface facilities will be salvaged, removed or abandoned in place, and the site will be transferred to the General Services Administration for disposition. Morton Salt Company owns the surrounding property and continues to mine salt. Formal mediation talks were successfully completed in 1998 and the Department agreed to assist Morton with the cost of mitigating risk in their operating shafts and safeguarding future mining operations.

FIGURE 2
1999 LIFE EXTENSION PROGRAM COST STATUS



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Life Extension: New Brine Tanks at West Hackberry Replace the Brine Pond



Life Extension: New Heat Exchanger at Big Hill Cool the Oil During Drawdown



Life Extension: New Brine Disposal Pumps at Bryan Mound Deliver Brine to the Gulf of Mexico During Oil Fill



Life Extension: New Water Injection Pump at West Hackberry “Push” Oil from Storage Caverns During Drawdown

CRUDE OIL ROYALTY-IN-KIND TRANSFER

In February 1999, the Department of Energy and the Department of the Interior initiated a plan to increase the Strategic Petroleum Reserve inventory with crude oil royalties for production from leases of Federal land in the Gulf of Mexico.

Under this plan, various leaseholders are directed to pay a portion of their royalties in crude oil instead of cash payments to the United States Treasury (royalty-in-kind). The Department of Energy contracts with commercial entities to receive this oil at offshore production facilities and transfer it to the Strategic Petroleum Reserve, either directly or in exchange for other crude oil delivered.

The goal of the royalty-in-kind plan is to replace the 28 million barrels of oil that Congress directed the Department to sell in 1996 and 1997. However, since the transfer of the royalty oil involves contractor costs for transportation to the storage sites, and considers the differences in quality of the royalty oil and the oil delivered to the Strategic Petroleum Reserve, the total amount is expected to be approximately 26-27 million barrels.

Phase I of the royalty oil transfer plan began in April 1999, with the negotiation and execution of agreements with Equiva Trading Co., BP Oil Supply Co., and Exxon Co., USA, for the transfer or exchange, of about nine million barrels. Deliveries under this phase will be made by August 2000.

Phase II began on April 28, 1999, with a competitive solicitation to industry for exchange of additional quantities of Federal royalty oil for crude oil delivered to the Strategic Petroleum Reserve's storage sites. Offers were received on May 25,

1999, and contracts were awarded on June 15, 1999 to Equiva Trading Co., Vastar Resources, Inc., Vitol S.A., Inc., and Mobil Supply, Trading and Transportation, for the delivery of 9.5 million barrels to the Bayou Choctaw and Big Hill storage sites from August 1, 1999, through February 29, 2000.

On November 4, 1999, the Strategic Petroleum Reserve issued another competitive solicitation to complete the contracting phase. On November 30, 1999, offers were received and on December 9, 1999, contracts awarded to Equiva Trading, Vitol and Koch Petroleum Group, L.P. for the delivery of 12.7 million barrels between February 1, 2000, and November 30, 2000.

As of December 31, 1999, contracts were awarded to assure the transfer of a total of 28 million barrels of royalty-in-kind oil to the Department of Energy's exchange partners.

CRUDE OIL INVENTORY STATUS

As of December 31, 1999, the crude oil inventory was 567 million barrels. This fill level is an increase of six million barrels from the inventory held at the end of calendar year 1998, as a result of the Department resuming fill through an exchange of Federal royalty-in kind crude oil as explained above.

The current mix of crude oil is 64 percent high sulfur (sour) and 36 percent low sulfur (sweet).

Table 2 lists year-end inventories and average daily fill rates from 1977 through 1999 (by fiscal and calendar year). Table 3 lists crude oil receipts by country of origin since 1977. Table 4 identifies the location of the inventory by storage site, and Figure 3 illustrates the cumulative oil fill.

TABLE 2
YEAR-END INVENTORIES AND OIL FILL HISTORY

	FISCAL YEAR		CALENDAR YEAR	
	Year-End Inventory (MMB)	Average Daily Fill Rate* (MB/D)	Year-End Inventory (MMB)	Average Daily Fill Rate* (MB/D)
1977	1.1	3	7.2	20
1978	49.1	131	68.5	168
1979	91.2	115	91.7	64
1980	92.8	4	107.8	44
1981	199.2	292	230.3	336
1982	277.9	215	293.8	174
1983	361.0	228	379.1	234
1984	431.1	191	450.5	195
1985	489.3	159	493.3	119
1986	506.4	47	511.6	51
1987	533.9	75	540.6	80
1988	554.7	57	559.5	52
1989	577.1	62	579.9	56
1990	589.6	34	585.7	27
1991	568.5	(58)	568.5	(47)
1992	571.4	8	574.7	17
1993	585.7	39	587.1	34
1994	591.7	16	591.7	13
1995	591.7	**	591.6	**
1996	573.6	(49)	565.8	(70)
1997	563.4	(28)	563.4	(7)
1998	563.4	**	561.1	***
1999	564.9	4	567.0	16

* Fill rates adjusted for oil sales.

** Fill suspended during this period

*** Decrease due to Maya exchange

TABLE 3
CRUDE OIL RECEIPTS THROUGH 1999
(MILLION BARRELS)

Source Country	1999	Cumulative	Percent of Total
Mexico	1.0	265.7	42.2
United Kingdom	1.3	149.5	23.7
United States*	1.4	49.5	7.9
Saudi Arabia		27.1	4.3
Libya		23.8	3.8
Iran		20.0	3.2
United Arab Emirates		18.4	2.9
Nigeria	0.5	15.7	2.5
Norway		11.9	1.9
Oman		9.0	1.4
Egypt		8.9	1.5
Ecuador		6.2	1.0
Algeria		6.2	1.0
Cameroon		3.4	0.5
Iraq		3.4	0.5
Gabon		2.4	0.4
Qatar		2.3	0.4
Columbia	1.2	1.2	0.2
Angola		1.0	0.2
Venezuela	2.5	3.5	0.6
Peru		0.4	0.1
Argentina		0.4	0.1
TOTAL RECEIPTS**	8.1	629.9	100.0

* Includes receipts from offshore Gulf of Mexico.

** Cumulative total receipts unadjusted for sales, exchanges and operational gains and losses.

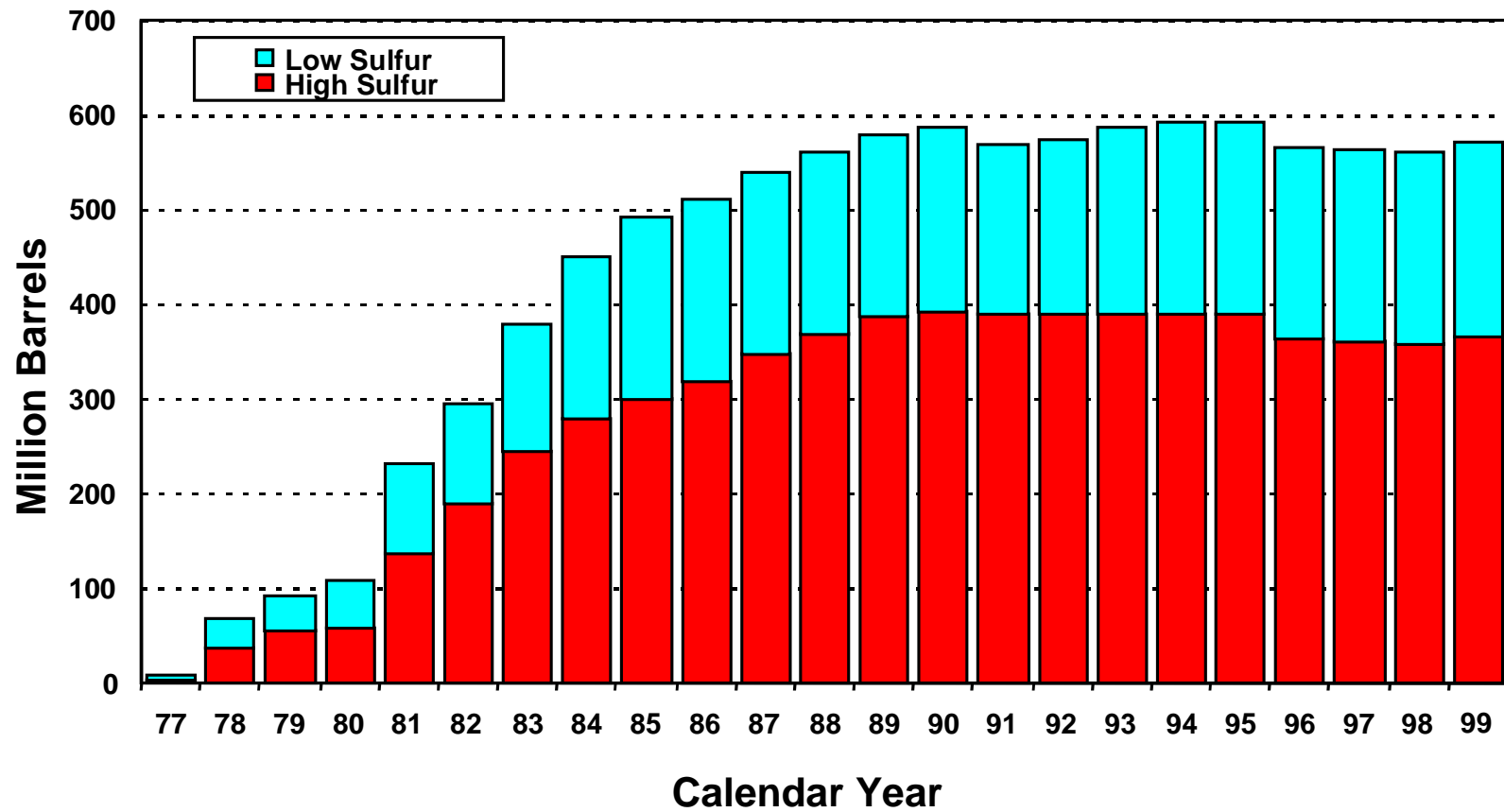
TABLE 4
STRATEGIC PETROLEUM RESERVE
CRUDE OIL INVENTORY
(December 31, 1999)

Storage Site	Inventory (Millions of Barrels)			Cubic Meters (Millions)
	Sweet*	Sour**	Total	
Bryan Mound Brazoria County, Texas	62.2	152.2	214.4	34.1
Big Hill Jefferson County, Texas	18.8	66.5	85.3	13.6
West Hackberry Cameron Parish, Louisiana	103.9	89.4	193.3	30.7
Bayou Choctaw Iberville Parish, Louisiana	21.2	50.6	71.8	11.4
Subtotal Underground Inventory	206.0	358.7	564.7	89.8
Tanks and Pipelines	0.1	2.2	2.3	0.4
Total Inventory	206.110	360.9	567.0	90.1

* Sulfur content not exceeding 0.5 percent

** Sulfur content greater than 0.5 percent

FIGURE 3
CUMULATIVE OIL FILL



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EMERGENCY RESPONSE CAPABILITIES

DRAWDOWN AND DISTRIBUTION PLAN

The current method for distributing crude oil is described in the "Strategic Petroleum Reserve Drawdown (Distribution) Plan," Amendment Number 4 to the Strategic Petroleum Reserve Plan. The principal method for distributing oil is by price competitive sale. The sale is open to the largest possible universe of eligible buyers to ensure economically and operationally efficient distribution.

The Plan also provides for the Secretary of Energy to direct, in any calendar month, the distribution of up to 10 percent of the volume of oil sold in that calendar month. The price for such oil will be the average price of oil sold at the contemporaneous competitive sale, or at the most recent competitive sale if no contemporaneous competitive sale is held.

COMPETITIVE SALES PROCEDURES

The Department's Standard Sales Provisions* govern the competitive sales process. The first step in the process is the issuance of a Notice of Sale which identifies the volume, characteristics, and location of the petroleum for sale, delivery dates, and procedures for submitting offers. Measures required for assuring performance and financial responsibility are also described in the Notice of Sale.

* Department of Energy, 10 CFR Part 625, Price Competitive Sale of Strategic Petroleum Reserve Petroleum; Standard Sales Provisions. The most recent edition of the Standard Sales Provisions was published in the *Federal Register* on October 8, 1998 (63 FR 54196).

Over the course of a drawdown, several Notices of Sale may be issued, each covering a sales period of one to two months. Offerors may have only seven days from the date a Notice of Sale is issued until offers are due, and thirty days or less until purchasers must begin accepting delivery of the oil. A less compressed schedule may become more feasible in subsequent sales periods. Because of the possible short initial lead time, the Department maintains a list of prospective offerors who will receive all Notices of Sale and intends to make maximum use of electronic communication for Notice of Sale distribution.

The next step in the sales process is for prospective purchasers to submit offers, as specified in the Notice of Sale. Offerors must accept, unconditionally, all terms and conditions in the Notice of Sale, and offer at least the minimum price, if any is specified in the Notice of Sale, and submit an offer guarantee of 5 percent of the maximum potential contract amount, or \$10 million, whichever is less, and offer at least the minimum price if any is specified in the Notice of Sale. The offer evaluation process is structured so that the offerors bidding the highest prices determine the transportation methods, up to the limits of the distribution system. Specific delivery arrangements are negotiated later in the process.

All "apparently successful offerors" are required, within five business days of being notified, to provide a Letter of Credit equal to 100 percent of the contract amount as a guarantee of performance and payment of amounts due under the contract. Upon timely receipt of the financial guarantees, and a final determination by the Contracting Officer that offers are responsive and offerors responsible, Notices of Award are issued. Deliveries to the purchasers may then begin, consistent with their arrangements for commercial

pipeline or marine vessel transportation. Such deliveries may begin as soon as the 16th day of the sales process, to the extent that the purchasers submit their financial guarantees and can arrange timely transportation.

HAWAII PURCHASES OF STRATEGIC PETROLEUM RESERVE CRUDE OIL

On September 27, 1999, the Department entered into a memorandum of understanding with the State of Hawaii concerning the state's purchases of Strategic Petroleum Reserve crude oil at the time of a drawdown and sale. This agreement implements the provisions of the Energy Conservation Reauthorization Act of 1998, which amended the Energy Policy and Conservation Act to improve the State's ability to acquire oil from the Strategic Petroleum Reserve during a drawdown.

The agreement provides that:

- ▶ In addition to submitting a competitive bid, Hawaii, or its designated eligible entity, may submit a "binding offer" for Strategic Petroleum Reserve crude oil in the event of a Strategic Petroleum Reserve drawdown and sale. A "binding offer" is an offer that obligates the offeror to take title to the petroleum without further negotiation or recourse to withdraw the offer.
- ▶ The price for oil purchased by Hawaii through a binding offer will be the volumetrically weighted average price of the successful competitive offers for the applicable category of oil;
- ▶ At the request of the Governor of Hawaii, Strategic Petroleum Reserve oil purchased by Hawaii at a competitive sale or through a binding offer shall have priority in Strategic Petroleum Reserve scheduling of deliveries; and
- ▶ Hawaii may enter into exchange or processing agreements to permit delivery to other locations, if a petroleum product of similar value or quantity is delivered to the State.

DRAWDOWN CAPABILITIES

The crude oil acquired for the Strategic Petroleum Reserve is commingled in caverns at the storage sites, creating various distinct crude oil streams available for sale during a drawdown. Table 5 identifies these streams, delivery modes, and locations, as of December 31, 1999.

The Strategic Petroleum Reserve can be drawn down at an initial sustainable rate of 4.1 million barrels per day for a period of 90 days. After this period, the drawdown rate will decrease gradually as site inventories are depleted and the declining number of caverns containing crude oil becomes a constraint.

TABLE 5
CRUDE OIL STREAMS

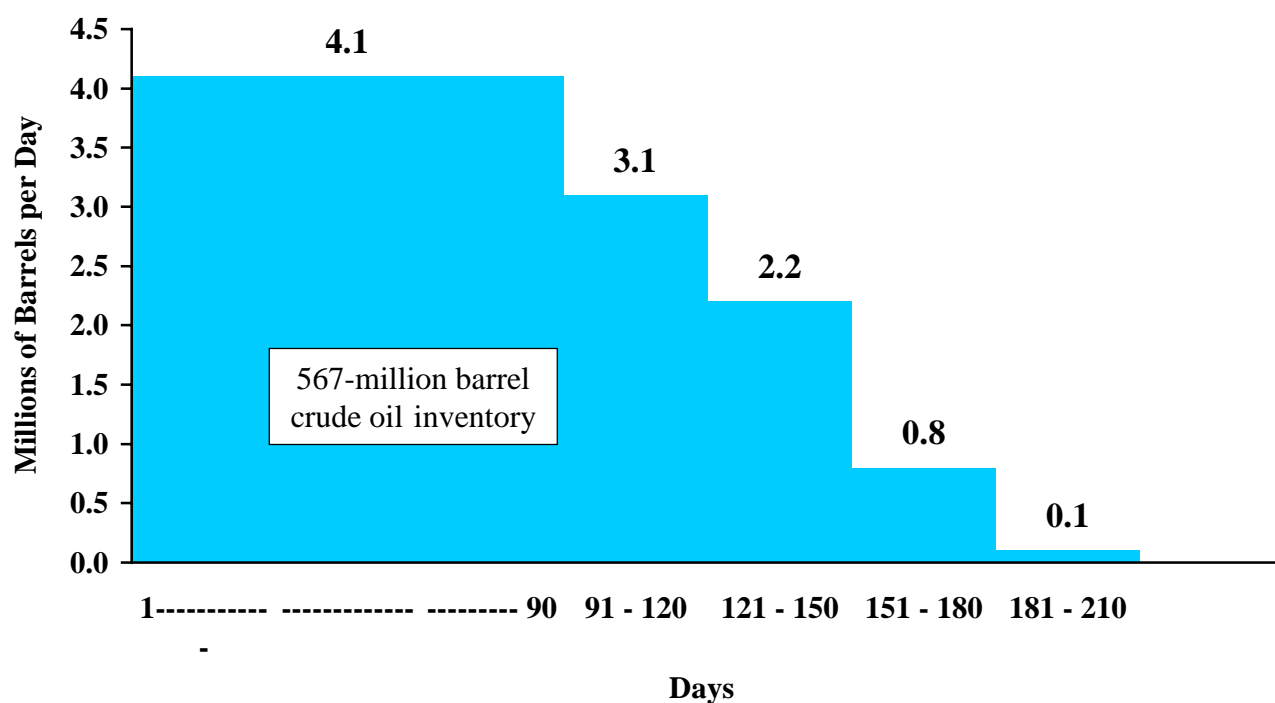
Crude Oil Stream	API Gravity	Sulfur Content	Delivery Mode and Location
SEAWAY GROUP:			
Bryan Mound Sweet	35.9	0.33	Pipeline or tankship at Seaway Terminal, Freeport,Texas; or Seaway Terminal, Texas City, Texas
Bryan Mound Sour	33.4	1.38	
TEXOMA GROUP:			
West Hackberry Sweet	37.0	0.29	Pipeline, tankship or barge at Sunoco Terminal, Nederland Texas;
West Hackberry Sour	33.5	1.41	Pipeline at Equilon-22"/DOE connection, Lake Charles, Louisiana
Big Hill Sweet	35.9	0.48	Pipeline, tankship or barge at Sunoco Terminal, Nederland, Texas;
Big Hill Sour	30.3	1.38	Pipeline or tankship at Unocal Terminal, Nederland, Texas; Pipeline at Equilon-20"/DOE connection, Winnie, Texas
CAPLINE GROUP:			
Bayou Choctaw Sweet	36.0	0.36	Pipeline at Capline or LOCAP Terminals, St. James, Louisiana;
Bayou Choctaw Sour	32.2	1.43	Tankship at Sugarland St. James Terminal, St. James, Louisiana Site Connection to Red Stick Pipeline, Iberville Parish, Louisiana

Figure 4 illustrates the physical drawdown capability, which provides for a distribution of 373 million barrels in 90 days, and 557 million barrels in 180 days.

The 1999 initial sustainable drawdown rate is 4.1 million barrels per day. This is higher than

the 1998 rate of 4.05 million barrels per day, and is attributable to the finalization of life extension activities at Bayou Choctaw, and the increased inventory resulting from royalty-in-kind receipts. The initial sustainable drawdown capability will ultimately stabilize at 4.42 million barrels per day, when the currently available capacity is filled.

FIGURE 4
STRATEGIC PETROLEUM RESERVE
MAXIMUM DRAWDOWN CAPABILITY
(December 31, 1999)



Note: Rates after 90 days are based on cavern-use assumptions. Actual rates are contingent on the specific caverns drawn down during a previous drawdown period.

DRAWDOWN READINESS ACTIVITIES

Drawdown readiness assurance activities during 1999, included:

- ▶ Developing plans for Eagle I, an exercise involving the entire Strategic Petroleum Reserve organization in the performance of all the functions associated with drawdown and sales procedures.
- ▶ Analyzing and updating the drawdown and distribution capabilities to reflect improvements from completed life extension activities.
- ▶ Demonstrating Bryan Mound's improved drawdown system capability, resulting from the Life Extension Program, by testing a physical oil movement.
- ▶ Conducting periodic assessments of the readiness and availability of all functions, facilities, and systems associated with a drawdown.

DISTRIBUTION PLAN AND CAPABILITIES

The Strategic Petroleum Reserve is connected to both commercial pipeline systems and marine terminals for crude oil distribution to U.S. refiners in the event of an energy emergency. The drawdown and distribution capabilities are summarized in Table 6. These capabilities are based on the current crude oil stream inventories, the existing site drawdown systems, and commercial distribution capabilities.

The Strategic Petroleum Reserve can access 21 refiners on the Gulf Coast and 28 refiners in the Midcontinent and Midwest, respectively, via local and interstate pipelines. These 49 refiners comprise approximately 50 percent of the total United States refining capacity, and 55 percent of oil imports.

TABLE 6
DRAWDOWN AND DISTRIBUTION CAPABILITIES
(THOUSANDS OF BARRELS PER DAY)

	Drawdown	Distribution
Seaway Group	1,500	2,243
Texoma Group	2,085	3,197
Capline Group	515	1,480
TOTAL	4,100	6,921

The Strategic Petroleum Reserve is also connected to five marine terminals for waterborne distribution: Seaway (Phillips) Terminal in Freeport, Texas; Seaway (ARCO) Terminal in Texas City, Texas; Sunoco and Unocal Terminals in Nederland, Texas; and Sugarland the St. James Terminal in St. James, Louisiana. These terminals have a total of 13 tanker berths and three barge berths, and a combined distribution capacity of approximately 2.5 million barrels per day. Figure 5 illustrates the Strategic Petroleum Reserve's pipeline and marine distribution capabilities

DISTRIBUTION ASSESSMENT

A comprehensive annual assessment is made of the present and projected capabilities of the commercial pipeline distribution systems to distribute the Strategic Petroleum Reserve's crude oil to the refining industry in the event of a drawdown. It verifies that there are adequate connections to the commercial distribution systems, and identifies any remedial plans, if appropriate.

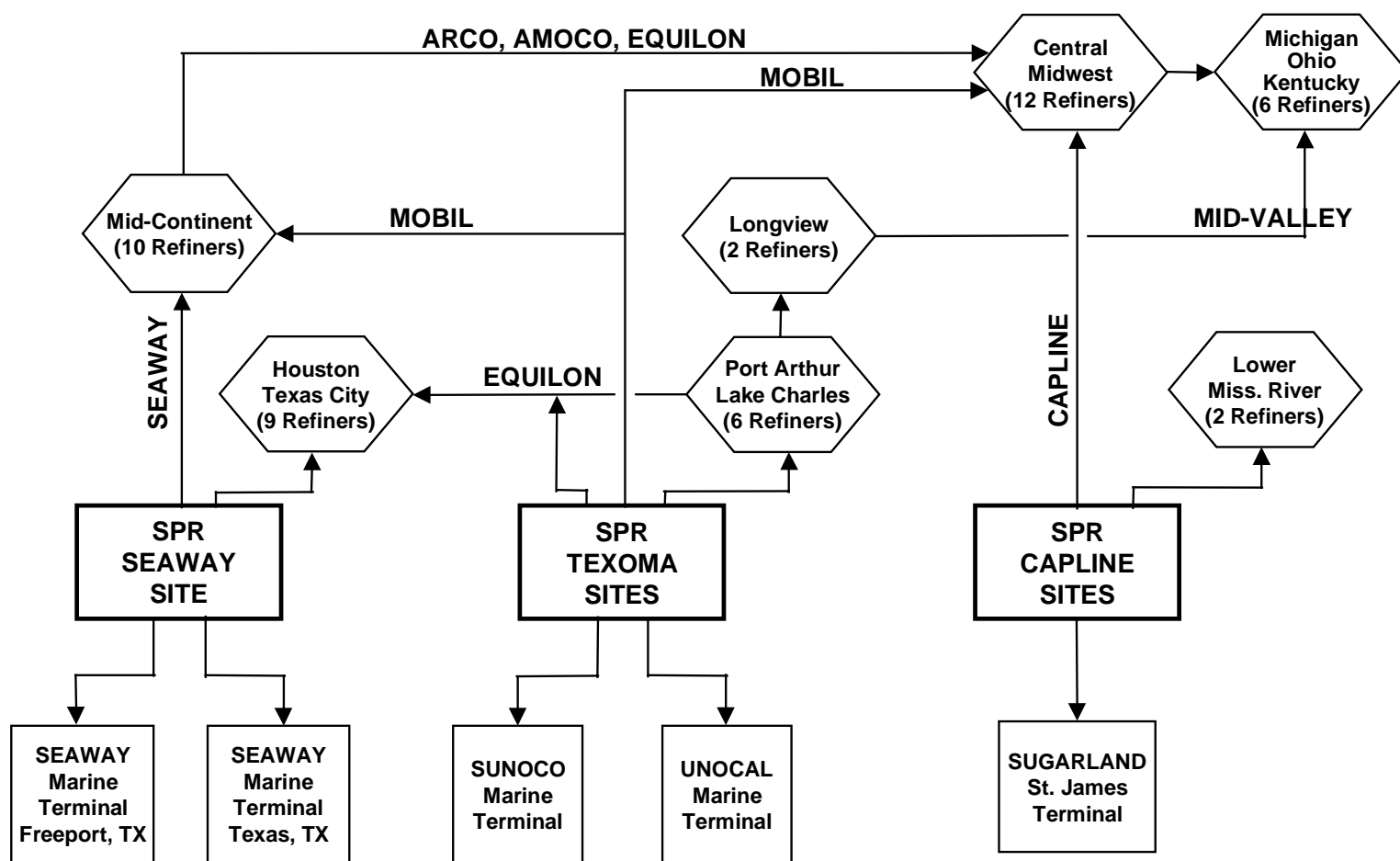
The assessment evaluates the Strategic Petroleum Reserve's capability to sustain its maximum drawdown rate in 1998, 2000, 2005 and 2010, based on future U.S. petroleum refining demands as forecasted in EIA's *Annual Energy Outlook, 1999*.

The analysis incorporates numerous changes made in the last few years to commercial pipeline distribution systems. Several pipeline systems increased pipeline capacity and/or announced plans to increase crude transmission capacity. The Seaway pipeline (to Cushing, Oklahoma), the Mobil 20-inch pipeline system, the Exxon pipeline system to its Baton Rouge, Louisiana, refinery, and the Equilon 22-inch pipeline across southern Louisiana, have increased system capacity.

A new pipeline from Sugarland Terminal on the Mississippi River to Texas City, Texas, is proposed and, similar to several of the previously mentioned systems, is in response to the potential for large increases in production of offshore oil currently being discovered in the deep water trends.

Finally, the assessment confirms that the Strategic Petroleum Reserve has sufficient offsite distribution capabilities (defined as 120 percent of the maximum drawdown rate) to achieve the current, and year 2000, drawdown rates.

FIGURE 5
PIPELINE AND MARINE DISTRIBUTION CAPABILITIES



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EMERGENCY RESPONSE CAPABILITIES

In EPCA, Congress specified an initial storage objective equal to 90 days of net petroleum imports. In 1976, this equated to a 500 million barrel Strategic Petroleum Reserve.

As of December 31, 1999, the inventory of crude oil was approximately 567 million barrels. This

stockpile provides an import protection level of 58 days, based on the U.S. net import rate for crude and petroleum products during 1999.

As shown in Figure 6, the level of net import protection has continued to decline over the last thirteen years, due to the increasing U.S. dependence on oil imports, depicted in Figure 7.

FIGURE 6
DAYS OF NET IMPORT PROTECTION (1977 - 1999)

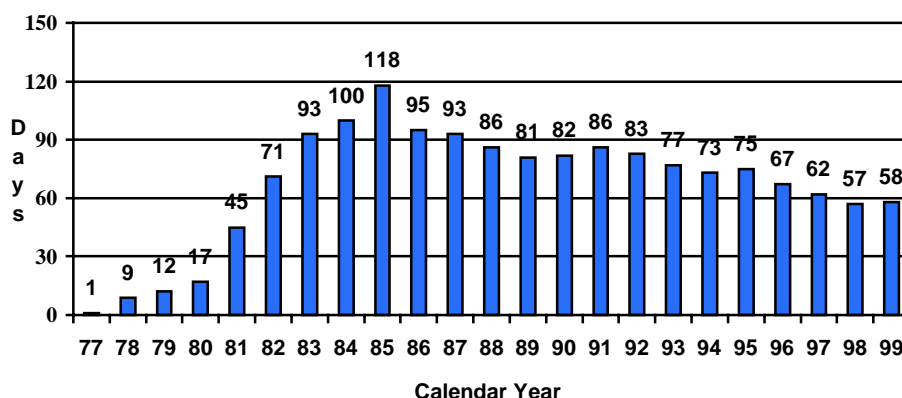
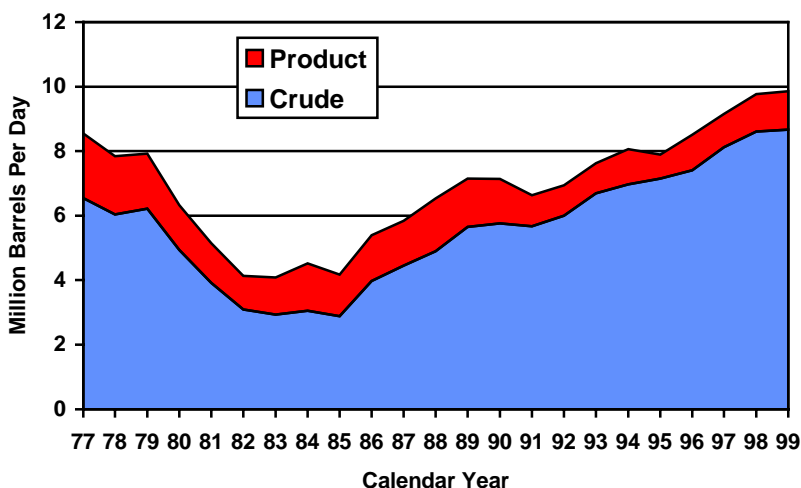


FIGURE 7
U.S. NET CRUDE AND PRODUCT IMPORTS (1977 - 1999)



The United States, as a member nation of the International Energy Agency, is committed to maintaining stocks of crude and products in reserves sufficient to sustain consumption for at least 90 days with no net oil imports. Computations of member stocks are based on both public and privately-held stocks, and net imports are defined as the average daily level in the previous year. The most recent International Energy Agency computation credits the United States with 143 days of emergency reserves, including both the Strategic Petroleum Reserve and privately held stocks.

COMMERCIALIZATION ACTIVITIES

DEPARTMENT POLICY AND OBJECTIVES

Section 159 (f)(D) of EPCA gives the Secretary of Energy statutory authority to “use, lease, maintain, sell or otherwise dispose of storage and related facilities.” EPCA was amended by the Balanced Budget Act of 1997 (Public Law 105-33) to provide the Secretary with the explicit authority to lease unused storage capacity within the Strategic Petroleum Reserve to foreign governments. The leasing authority for the storage of either foreign or commercial customers promotes world oil stockpiling, contributing to both the United States and world energy security.

Underutilized distribution facilities have been leased or outgranted since 1995. The government contracts for the leases require that the facilities be maintained in good condition, and give it priority for the emergency drawdown of oil from the Strategic Petroleum Reserve on fifteen (15) days’ notice.

COMMERCIAL LEASES OF DISTRIBUTION FACILITIES

Over the last four years, the Strategic Petroleum Reserve leased the St. James Marine Terminal and three of its five major crude oil pipelines to industry for commercial crude oil operations.

ST. JAMES TERMINAL

Constructed in 1980, the St. James Terminal has six storage tanks and two tanker docks located on the west bank of the Mississippi River at St. James, Louisiana.

The St. James Terminal was leased to Shell Pipe Line Corporation (now Equilon Pipeline Company) on January 31, 1997, on a revenue-sharing basis. The leasing of this facility provided an annual operational cost savings of \$6-\$7 million per year. The United States Treasury received \$550,264 in lease revenues from the terminal.

BAYOU CHOCTAW PIPELINE

The Bayou Choctaw pipeline is a 37-mile, 36-inch pipeline extending from the Bayou Choctaw storage facility in Plaquemine, Louisiana to marine facilities in St. James.

The pipeline was leased to Shell Pipe Line Corporation (now Equilon Pipeline Company) on May 1, 1997, on a revenue-sharing basis. In 1998, the Department modified the lease from a year-to-year to a 10-year lease, and Equilon initiated the construction of a 17-mile extension to the pipeline for crude movements to the Baton Rouge area. The United States Treasury received \$160,707 in lease revenues from the pipeline.

BIG HILL PIPELINE

The Big Hill pipeline is a 24.4-mile, 36-inch pipeline extending from the Big Hill storage facility near Winnie, Texas, to marine facilities in Nederland, Texas.

A 7.5 mile segment of this pipeline was leased to Texaco Pipe Line Incorporated (now Equilon Pipeline Company) on October 15, 1997, under a 75 percent capacity lease contract. The United States Treasury received \$400,000 in lease revenues from the pipeline.

BRYAN MOUND PIPELINES

The Bryan Mound storage site has three connecting pipelines: a 46-mile, 40-inch pipeline to Texas City; a 4-mile, 30-inch pipeline to Seaway's Jones Creek

Tank Farm; and a 3.9-mile, 30-inch pipeline to Seaway's marine docks at Freeport, Texas.

During the first six months of 1999, the Bryan Mound pipelines were leased to the Seaway Pipeline Company and used to move crude oil from Seaway's Texas City facility to its Jones Creek facility while its storage tanks were out of service for maintenance.

A long-term lease (10+ year) was also awarded to Exxon Pipeline Company to use the Texas City and Jones Creek pipeline segments, starting in July 2000, as part of its onshore distribution system for Exxon's Diana-Hoover production in the Gulf of Mexico. Lease revenues of \$674,172 were received from the pipeline. The United States Treasury received \$150,000, and \$524,172 was paid in oil.

WEST HACKBERRY PIPELINES

The West Hackberry storage site has two connecting pipelines: a 42.8-mile, 42-inch pipeline from the West Hackberry storage site to Nederland, Texas, and a 13.6-mile, 36-inch pipeline from the West Hackberry storage site to Lake Charles, Louisiana. Neither pipeline is leased due to lack of industry interest in these facilities.

FOREIGN OIL STORAGE

The Big Hill storage site obtained foreign trade zone subzone status on September 28, 1998. A foreign trade zone is a site within the United States, in or near a United States Customs port of entry, where foreign and domestic merchandise is considered to be in international commerce. The designation permits customers to store oil without paying customs fees and certain taxes, and is expected to enhance the Department's offer to store oil for foreign governments, or their representatives. The Department of Energy is the first government entity to receive foreign trade zone status for one of its facilities.

The Big Hill storage facility has the capacity to store 170 million barrels of crude oil and currently contains 85 million barrels of oil. The unused storage space could generate revenue for the U.S. Treasury, add oil to the Strategic Petroleum Reserve (in lieu of a fee), and increase world oil stockpiling.

In 1999, the Department pursued foreign and commercial storage initiatives to acquire oil in lieu of payment. On February 17, 1999, the Department issued a solicitation for commercial oil storage, offering to store up to 70 million barrels at the Big Hill site in exchange for payment in crude oil. The Department received several offers and conducted discussions with each offeror, however, storage proposals were not acceptable, and in March 1999, the Department suspended its solicitation and rejected all offers for commercial storage.

BUDGET AND FINANCE

The Department of the Interior and Related Agencies Appropriations Act, 1999, provided \$160.1 million for Strategic Petroleum Reserve facilities operations and Management. Appendix C of the Consolidated Appropriations Act, 2000, included \$159 million for Strategic Petroleum Reserve facilities, operation and Management.

APPROPRIATIONS THROUGH FISCAL YEAR 1999

A total amount of \$21.3 billion, net of sales and transfers, has been appropriated for the Strategic Petroleum Reserve through fiscal year 1999. Included in this total is the distribution of annual and total appropriations described in Table 7. Figure 8 illustrates the cumulative appropriations for storage facilities operations and management, as well as petroleum acquisition and transportation.

STRATEGIC PETROLEUM RESERVE ACCOUNT

The Strategic Petroleum Reserve Account funds the development, operation, and maintenance of Reserve facilities; the salaries and expenses necessary to plan and manage the program, including the operation of the Project Management Office in New Orleans, Louisiana; and the activities pertinent to major issues concerning the development and use of the Strategic Petroleum Reserve.

Obligations for the Strategic Petroleum Reserve in fiscal year 1999 totaled approximately \$177.7 million. From this amount, \$15.3 million was

obligated for federal program management salaries and benefits, and \$162.4 million was obligated for contractual goods and services to operate and maintain the Strategic Petroleum Reserve.

SPR PETROLEUM ACCOUNT

The SPR Petroleum Account funds the acquisition of oil for the Strategic Petroleum Reserve; the associated costs for transportation and terminalling; United States customs duties, Superfund and Oil Spill Liabilities Trust Fund taxes; and other miscellaneous costs, such as Defense Energy Support Center administration costs associated with non-emergency sales, as well as oil acquisition, and transportation support. During an emergency drawdown and sale, the SPR Petroleum Account is the source of funding for the incremental costs of withdrawing oil from the storage caverns and transporting it to the point where purchasers take title. During an emergency drawdown and sale, an amount equal to Federal receipts realized is deposited in the SPR Petroleum Account to create additional budget authority for filling the Reserve. At the end of fiscal year 1999, approximately \$32 million remained available for obligation in the Account, an amount sufficient to finance approximately 60% of the incremental costs of a six-month emergency drawdown.

The capitalized cost for the oil in the Strategic Petroleum Reserve at the end of fiscal year 1999 was \$15 billion, for an average cost per barrel of approximately \$27. The cost for the Department of Defense inventory was \$125 million, for an average cost per barrel of \$19.32.

TABLE 7
ANNUAL APPROPRIATIONS FOR STORAGE FACILITIES OPERATIONS AND
MANAGEMENT AND PETROLEUM ACQUISITION AND TRANSPORTATION

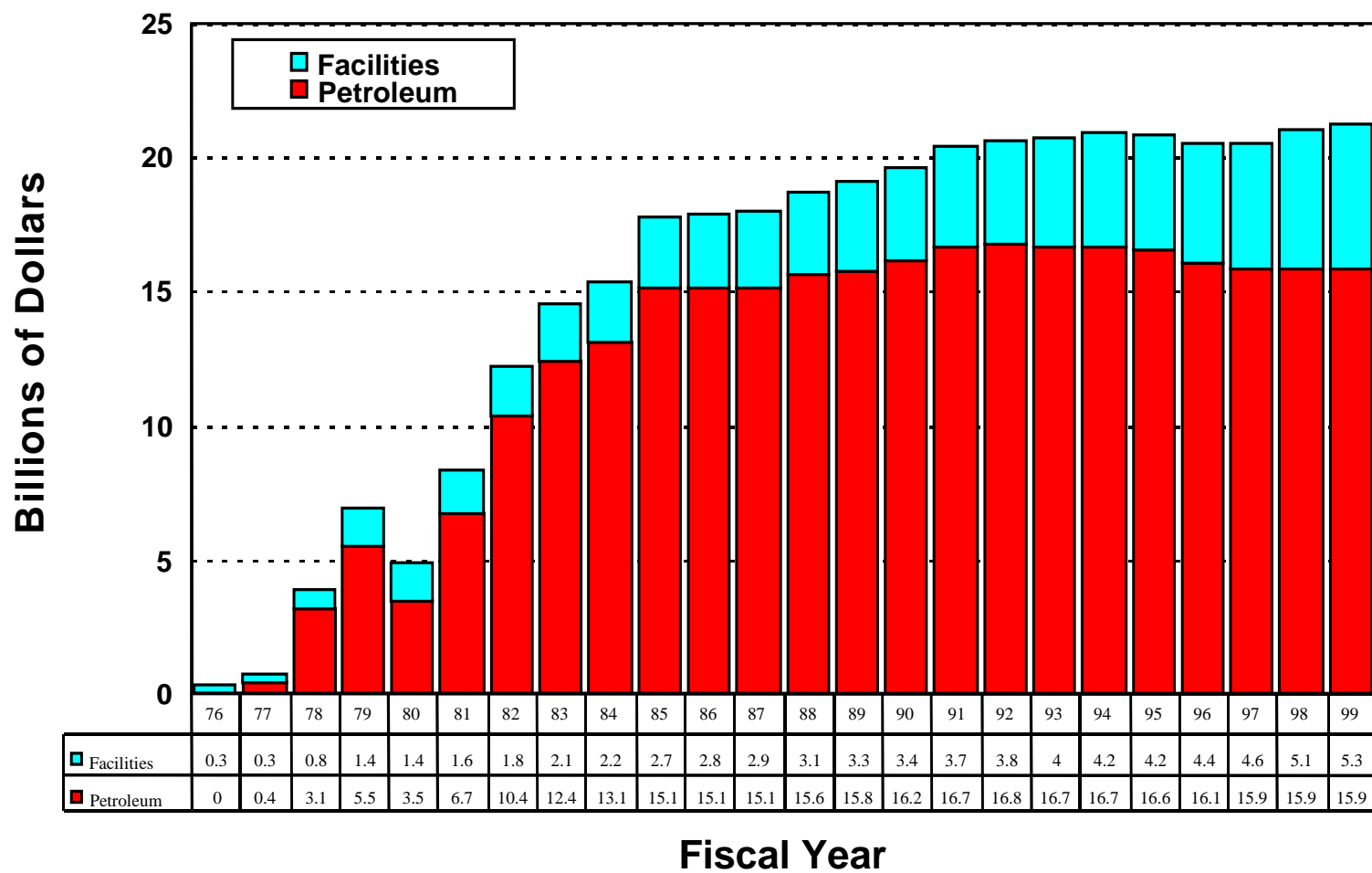
Fiscal Year	Oil Account	Facilities	Management	Total	Defense SPR
1976	0	300,000	13,975	313,975	
1977	440,000	0	7,824	447,824	
1978	2,703,469	463,933	14,704	3,182,106	
Total 1979 Appropriations*	2,356,456	632,504	18,111	3,007,071	
Total 1980 Appropriations*	(2,022,272)	0	22,272	(2,000,000)	
Total 1981 Appropriations*	3,205,094	108,168	19,391	3,332,653	
Total 1982 Appropriations*	3,679,700	175,656	20,076	3,875,432	
1983	2,074,060	222,528	19,590	2,316,178	
1984	650,000	142,357	16,413	808,770	
1985	2,049,550	441,300	17,890	2,508,740	
Total 1986*	(12,964)	106,979	13,518	107,533	
1987	0	134,021	13,412	147,433	
1988	438,744	151,886	12,276	602,906	
1989	242,000	160,021	13,400	415,421	
1990	371,916	179,530	12,953	564,399	
1991	566,318	187,728	12,846	766,892	
1992	88,413	171,678	13,384	273,475	
1993	(125,625)	161,940	14,227	50,542	
DOD Transfer (non add)	124,925	700	0	125,625	125,625
1994	0	191,035	15,775	206,810	
1995	<u>(107,764)</u>	<u>226,938</u>	<u>16,780</u>	<u>135,954</u>	
1996 transfer from SPR Petroleum Account	(187,000)	170,173	16,827	0	
1996 Weeks Is. Oil Sale	(97,114)	97,114	0		
1996 deficit reduction oil sale	<u>(227,000)</u>	<u>0</u>		<u>(227,000)</u>	
	<u>(511,114)</u>	<u>267,287</u>	16,827	<u>(227,000)</u>	
1996 Total					
1997 Total*	(220,000)	(193,000)	(16,000)	(11,000)	
1998	0	191,500	16,000	207,500	
1999	0	145,120	14,805	159,925	

* Includes reprogramming and rescission actions.

Note: FY 1991 SPR Petroleum Account of \$566,318 includes proceeds of \$122,681 from the Test Sale authorized by the President on September 26, 1990, pursuant to the EPCA authorities enacted September 15, 1990, in P.L. 101-383. These proceeds are recorded as additional budget authority rather than reductions to obligations, costs, and outlays. It also includes \$315,424,985 in Desert Storm Drawdown proceeds and \$19,755,064 from FY 1991 NPR excess receipts. Thus the cumulative budget authority is "gross" and not related directly to the inventory of oil on hand.

Data as of December 31, 1999

FIGURE 8
CUMULATIVE FUNDING



COMMERCIALIZATION REVENUES

The Strategic Petroleum Reserve generated \$1,785,143 in revenues for the United States Treasury from leases of distribution facilities. See Table 8 below.

TABLE 8
SUMMARY OF COMMERCIALIZATION REVENUES
(December 31, 1999)

FACILITY OR ASSET	1996	1997	1998	1999
St. James Terminal	No Lease	\$133,300	\$481,010	\$550,264
Bayou Choctaw Pipeline	No Lease	0	0	\$160,707
Big Hill Pipeline	\$472,809	\$429,824	\$402,525	\$400,000
Bryan Mound Pipelines	\$102,606	No Lease	No Lease	\$674,172
Total Revenue	\$575,415	\$563,124	\$883,535	\$1,785,143

Notes:

Bryan Mound crude pipelines were first leased to Seaway Pipeline Company in May 1996, and again in December 1998 (short term); leased to Exxon in January 1999.

Big Hill crude pipeline was leased to Texaco Pipe Line Inc. on May 15, 1996.

St. James Terminal was leased to Shell Pipeline Company on January 31, 1997.

Bayou Choctaw crude pipeline was leased to Shell Pipeline Co. on May 1, 1997.

Big Hill crude pipeline was released to Texaco Pipe Line Inc. on October 15, 1997.

PERFORMANCE MEASUREMENT

Federal agencies are required to prepare annual performance plans (Government Performance and Results Act of 1993). The Strategic Petroleum

Reserve incorporated its mandates into its performance management system, and successfully met or exceeded 19 of the 21 targets for performance measurement.

PERFORMANCE MEASURE	FY 1999 TARGET	FY 1999 ACTUAL	COMMENTS
Total capacity at four sites.	700 MMB	700 MMB	Met target
Distribution Rate	$\geq 120\%$ of drawdown rate	158%	Exceeded target
Percent of Life Extension Program under contract	96%	96%	Obligated an additional \$21M of the \$328M Total Estimated Cost. Brings cumulative obligations for the program to \$316M
Drawdown Rate	4.01 MMB/Day	4.1 MMB/Day	With completion of LEP projects at Bayou Choctaw, and initial receipt of Royalty in Kind oil, increased initial 90-day drawdown rate from 4.05 to 4.1 MMB/Day
Calculated predicted site availability	$> 95\%$	96%	Met target
Weighted annual average of the quality of Preventive Maintenance, Maintenance Support, Engineered Maintenance Standards, Scheduling Effectiveness, Productivity, Preventive Maintenance completion and Corrective Maintenance backlog	$\geq 95\%$ of possible points on Maintenance Performance Appraisal Report	95.7%	Met target
Weighted annual average of the performance elements of Material Performance Appraisal Compilation.	≥ 95 Points	96.1 Points	Met target
Recovery equipment testing	95% Test Objectives	Not Applicable	No recovery tests were conducted this fiscal year.
Percent of: - Trained Emergency Response Team members at each site. - Operational spill response equipment available. Primary or secondary fire response equipment available.	95% 95% 95%	108% 99.8% 96.6%	Exceeded targets
Percent of site security survey ratings that are satisfactory.	100%	100%	Met target

PERFORMANCE MEASURE	FY 1999 TARGET	FY 1999 ACTUAL	COMMENTS
Oil inventory available	561 MMB	564.9 MMB	Subsequent to the exchange of Maya crude oil and decommissioning of Weeks Island, the inventory was increased by 4.9 MMB due to addition of Royalty in Kind oil.
Variance between oil sent and oil received during oil movements (accountability)	$\leq 0.4\%$	0.2 %	Met target
Percentage of crude oil samples meeting specifications	$\geq 95\%$	99.89%	Met target
Number of Notice of violations received.	≤ 5 -year moving average (Numeric target < 1)	0	Met target
Number of reportable oil & brine spills.	≤ 5 -year moving average (Numeric target < 5.2)	3	Met target
Hazardous waste volume	4,000 LBS	6,678 LBS	In FY 1999, 39.5% (2,637 lbs.) of generated hazardous waste was a result of Life Extension activities. Also, a one-time disposal of old paint (792 lbs.) contributed to the excess of the established target.
Lost workday case rate for M&O contractor	≤ 1.5 cases per 200,000 worker hours	1.2 cases	Met target.
Lost workdays per case for M&O contractor (accountability)	≤ 39 days per 200,000 worker hours	76.4 days	There were nine injuries during FY99 that accounted for this anomaly in lost workdays per case.
Documented accomplishments in the Business Management Oversight Program, M&O Award Fee Evaluation Process and Annual Assurance Memorandum	Able to achieve economies and efficiencies in project planning and control, procurement, information technology, financial management, internal audits, human resources and quality management.	Economies/efficiencies achieved.	No major issues surfaced in the Business Management Oversight Program. M&O contractor's overall performance rated Very Good. The management review conducted as part of the FY 1999 Assurance Memorandum reflected management controls working effectively.

OTHER ACTIVITIES

ORGANIZATIONAL IMPROVEMENT ACTIVITIES

The Strategic Petroleum Reserve continued to build on its previous accomplishments in organization and continuous quality improvement.

The Program Office won a Department of Energy Performance Excellence Award in the Champion category. The award is based on the Malcolm Baldrige National Quality Award Criteria. All levels of the organization worked on improvement projects, many of which originated from feedback reports from quality award applications.

The Customer Service Team began an initiative to focus on oil customers in order to improve working relations with them.

MAJOR IMPROVEMENT INITIATIVES

The Energy Performance Excellence Award application afforded an opportunity to make improvements in processes.

Similarly, the Project Management Office identified ten processes for improvement based on feedback from the Energy and Louisiana Quality Awards. Seven were completed 1999.

The Project Management Office issued a quality policy statement:

“The Strategic Petroleum Reserve is committed to demonstrating and promoting excellence and continually improving processes, products, and services to better satisfy our customers’ needs and requirements.”

The Malcolm Baldrige National Quality Award Criteria and the International Organization for

Standardization's (ISO) 9001 standards for Quality Management Systems are the bases for continuously improving organizational effectiveness,

DynMcDermott implemented ISO 9001 (Quality Management Systems) and ISO 14001 (Environmental Management Systems) and plans to obtain certification by a third-party registrar for both ISO 9001 and ISO 14001 in 2000.

CUSTOMER SERVICE INITIATIVES

The Strategic Petroleum Reserve continued to expand customer outreach efforts. The Project Management Office developed two drawdown and distribution models that have drawn much interest at conferences, trade shows, and Department headquarters, and exhibited the models at the Offshore Technology Conference in Houston in May 1999.

The Customer Service Team is identifying customers that are most likely to purchase oil in an energy emergency. Small teams will visit potential customers to establish relations with them and explore how they can best be served.

SIXTH ANNUAL QUALITY EXPO

The Strategic Petroleum Reserve sponsored its Sixth Annual Quality EXPO on November 9-10, 1999, in New Orleans -- "Continuous Quality Improvement - Leading Change into the New Millennium."

The Strategic Petroleum Reserve, DynMcDermott, Defense Contract Management Command, and Sandia National Laboratories, exhibited thirty-two improvement projects.

DynMcDermott and the four sites submitted applications for internal awards based on the Malcolm Baldrige National Quality Award Criteria. These were evaluated by DynMcDermott personnel who have experience as quality award examiners. Different levels of awards were presented to each directorate and site, and to the winners of quality improvement team competitions held at the EXPO.

QUALITY ASSURANCE

The Project Management Office completed a Contractor Performance Award Evaluation Implementation Plan and revised its internal order for site management appraisals. It then conducted a management appraisal of the Bayou Choctaw site.

The quality assurance group also oversaw independent audits of construction management, unclassified computer security, architect and engineering services, and the operation and maintenance of crude oil vapor pressure measurement during the year.

QUALITY AWARD EXAMINERS

Employees of the Strategic Petroleum Reserve and DynMcDermott were quality award examiners again in 1999. Two employees were examiners for the Presidential Quality Award, the federal government's equivalent of the Malcolm Baldrige National Quality Award, and several served as examiners for the Energy Performance Excellence Awards and the Louisiana Quality Award.

ENVIRONMENT, SAFETY, AND HEALTH

The Strategic Petroleum Reserve verified and strengthened the Integrated Safety Management (ISM) System, implemented in 1998. This system addresses how work is managed and performed and its objectives are to weave environmental, safety, and health considerations into management and work practices at all levels. Verification involved adapting a pre-existing on-site management appraisal process.

Teams of Federal personnel conducted intensive week-long appraisals of DynMcDermott, the Management and Operating contractor, at its New Orleans headquarters and at each storage site. DynMcDermott reported its first annual verification in September 1999, after conducting its own site-by-site assessments. Based on a review of its annual verification report, and its on-site assessments against the Department's ISM implementation criteria. Department of Energy line management concluded that it is managing the Strategic Petroleum Reserve in accordance with all ISM guiding principles and core functions.

The Strategic Petroleum Reserve's Behavioral Safety Program is the foundation for ISM implementation. In the second full year of this program, contractor personnel at the sites exhibited safe behaviors 95 percent of the time as determined by observations by fellow workers. There was only one serious injury out of 25,000 permitted work activities. This was a non-fatal electrical accident at Big Hill where a subcontractor employee was hurt. An Expanded Type C accident investigation was performed and a report was issued in July. All corrective actions are complete.

During the year, the Strategic Petroleum Reserve achieved a significant milestone in its ergonomic program with the completion of an ergonomic assessment. This effort grew out of an Occupational Safety and Health Administration

finding that 43.1 percent of on-the-job injuries, between 1991-1997, were ergonomic. Outside experts analyzed field and office workstations at all sites, job-specific findings were ranked by risk, and recommendations were made. All critical and marginal risks will be addressed in fiscal year 2000, and other lower risks in fiscal year 2001.

Routine operations and facility and equipment repairs, replacements, or upgrades planned for 1999 were reviewed throughout the year for environmental consequences to determine if they required further review under the National Environmental Policy Act (NEPA). One proposed action required an Environmental Assessment (EA). In March 1999, an EA was prepared for Big Hill Facility Storage of Commercial Crude Oil Project (DOE/EA-1289) and a Finding of No Significant Impact was issued. This EA supported a proposed action to lease up to 70 million barrels of unused Big Hill storage capacity to other parties for crude oil storage.

The EA concluded that impacts would not be materially different in nature or degree from those currently experienced under permitted operations, and were already covered under existing NEPA documentation. The proposed action, however, was withdrawn until such time when market conditions become favorable.

The Environmental Protection Agency (EPA) reviewed the environmental management system during visits to New Orleans, Bryan Mound, and Bayou Choctaw, against the disciplines and requirements of ISO 14001. EPA concluded that the Strategic Petroleum Reserve has a formalized system that works well.

Pollution prevention is an integral part of routine activities, including inventory management, maintenance, procurement, warehousing, property management, finance, budgeting, and engineering.

An important element of the environmental management system is its pollution prevention program, including waste minimization, and recycling. A significant achievement in 1999 was the bioremediation of an area of oil-contaminated soil at West Hackberry. The contaminated soil was excavated and placed in a pit and treated with a suspension of microorganisms, enzymes, and surfactants. In about a month, the oil was reduced to carbon dioxide and water. Based on this experience, Louisiana approved using the same approach on oil-contaminated soil at St. James Terminal.

For the year, the Strategic Petroleum Reserve reported a total of 9,072 pounds of hazardous waste, exceeding its hazardous waste reduction goals. This was due primarily to the quantity of solvent-based paints used in life extension construction and maintenance which accounted for more than 80 percent of reported wastes. In contrast, paper recycling continued to be successful, surpassing targets, and pollution prevention continued to contribute savings to operating costs.

Groundwater has been monitored for salinity and hydrocarbons at Bayou Choctaw, Big Hill, Bryan Mound, and West Hackberry for many years. Groundwater monitoring for hydrocarbons was added at Weeks Island as part of decommissioning and will continue for five years. To date, there has been no detectable hydrocarbon contamination in the groundwater at any site.

At West Hackberry, groundwater remediation has been ongoing since 1995 to correct contamination from a leaking brine pond. For the four-year period, 1995–1998, groundwater recovery operations stabilized the shape and extent of the salinity plume within site boundaries. In 1999, the brine pond was replaced by aboveground tanks as part of life extension. This eliminated the source of contamination. For this action, the Office of Fossil Energy recognized the Strategic Petroleum Reserve with an Environment, Safety and Health Achievement Award.

There was one oil spill, less than one-half pint, that produced a sheen on an irrigation ditch; three brine spills, the largest of which was 30 barrels; and 11 self-reported permit non-compliances, but none resulted in environmental damage.

Life extension construction, Weeks Island decommissioning activities, and commercialization initiatives required numerous actions to renew, extend, modify, and/or update various environmental permits.

SECURITY

The Strategic Petroleum Reserve has formal liaison relationships with other Federal, state and local law enforcement agencies for emergency responses at its facilities. Periodic tactical exercises with outside law enforcement agencies, and continued intensive training, ensure the proficiency of the protective force.

In November 1999, the Strategic Petroleum Reserve's Security Police Officers competed in an international police competition in Orlando, Florida. The five-person team placed 11 out of 75 U.S. and international teams. The officers demonstrated their ability to operate under stress, meet severe physical challenges, and compete and win in competition with some of the world's best tactical police teams.

The Borg-Warner Protective Services Corporation provides protection services through a subcontract

with DynMcDermott. The current protection force includes 151 Security Police Officers and provides protection for the four storage sites and the Project Management Office complex. Since November 1998, they have been on enhanced vigilance status in response to tensions in the Middle East.

Site physical security systems, such as intrusion detection equipment and alarm displays, were upgraded as part of the life extension program, enhancing their reliability.

REAL ESTATE ACTIONS

In September 1999, the Department of Energy requested the General Services Administration to sell the 431-acre Weeks Island facility. The Weeks Island decommissioning was completed in November 1999.

APPENDIX A

Strategic Petroleum Reserve Site Information

BRYAN MOUND

Location

Brazoria County, Texas (three miles southwest of Freeport, Texas).

Site Description

232-million-barrel storage facility consisting of 20 caverns.

24-inch diameter, 6-mile brine disposal pipeline extending 4 miles offshore in the Gulf of Mexico.

Oil, brine and raw water piping distribution system connecting caverns with central plant and water intake structure located on Brazos River. Twenty-seven (27) pumps totaling approximately 47,750 horsepower.

System Parameters

Drawdown Rate:	1,500,000 bbl/d
Raw Water Pumping Rate:	1,545,000 bbl/d
Oil Fill Rate:	225,000 bbl/d
Brine Disposal Rate:	260,000 bbl/d

Distribution Facilities

DOE 3.9 mile, 30-inch pipeline to Seaway Freeport Marine Terminal, DOE 4.0 mile, 30-inch pipeline to Seaway Jones Creek Tank Farm and Pipeline and DOE 46 mile, 40-inch pipeline to Seaway Texas City Terminal and Docks.

Acquisition

Acquired 499.47 acres fee simple, by condemnation April 1977, from Freeport Mineral Company and other owners. Dow Chemical Company was the previous operator.

WEST HACKBERRY

Location

Cameron Parish, Louisiana (25 miles southwest of Lake Charles, Louisiana).

Site Description

222-million-barrel storage facility consisting of 22 caverns.

Oil, brine, and raw water piping distribution system connecting caverns with central plant, water intake structure located on Intra-coastal waterway and 10 brine disposal wells. Twenty-one (21) pumps totaling over 40,850 horsepower.

System Parameters

Drawdown rate:	1,300,000 bbl/d
Raw Water Pumping Rate:	1,339,000 bbl/d
Oil Fill Rate:	225,000 bbl/d
Brine Disposal Rate:	275,000 bbl/d

Distribution Facilities

DOE 42.8 mile, 42-inch pipeline to Sunoco Nederland Terminal.

DOE 13.6 mile, 36-inch pipeline to Equilon common carrier pipeline system at Lake Charles.

Acquisition

Acquired 405.36 acres fee simple by condemnation, April 1977, from numerous private landowners. Olin Corporation was the previous site operator. Acquired 160.0 additional acres fee simple by condemnation in two actions, July 1979 and March 1980.

BIG HILL

Location

Jefferson County, Texas (20 miles southwest of Beaumont, Texas).

Site Description

170-million-barrel storage facility consisting of fourteen caverns.

Oil, brine, and raw water systems connecting caverns with central plant, water intake structure located on the Intracoastal Waterway, and a 48-inch diameter, 14-mile brine disposal pipeline extending 5 miles offshore in the Gulf of Mexico. Twenty-six (26) pumps totaling 42,800 horsepower.

System Parameters

Drawdown Rate: 930,000 bbl/d
(Will increase to 1,100,000 bbl/d in 2000)
Raw Water Pumping Rate: 1,400,000 bbl/d
Oil Fill Rate: 225,000 bbl/d
Brine Disposal Rate: 432,000 bbl/d

Distribution Facilities

DOE 24.5 mile, 36-inch pipeline to Sunoco Nederland Terminal
Unocal 2 mile, 36-inch pipeline to Unocal Docks
Equilon 20-inch pipeline system to East Houston.

Acquisition

Acquired 271 acres fee simple, by condemnation November 1982 and July 1983, from three landowners, i.e., 238.48 acres from Amoco, 27.06 acres from the Pipkin estate, and 5.46 acres from the Patrick Henry Phelan estate.

BAYOU CHOCTAW

Location

Iberville Parish, Louisiana (12 miles southwest of Baton Rouge, Louisiana).

Site Description

76-million-barrel storage facility consisting of six caverns.

Oil, brine, and raw water piping distribution system connecting caverns with central plant, a water intake structure, 12 brine disposal wells, and a pipeline for disposing of brine to Union Texas Petroleum, Inc. Sixteen(16) pumps totaling over 18,000 horsepower.

System Parameters

Drawdown Rate: 515,000 bbl/d

Raw Water Pumping Rate: 515,000 bbl/d
Oil Fill Rate: 110,000 bbl/d
Brine Disposal Rate: 110,000 bbl/d

Distribution Facilities

DOE 37.2 mile, 36-inch pipeline to Equilon's Sugarland Terminal and Capline Pipeline. DOE 16 mile, 24 inch pipeline to Baton Rouge.

Acquisition

Acquired 355.95 acres fee simple, by condemnation April 1977, from numerous private owners. Union Texas Petroleum (a subsidiary of Allied Corporation) was the previous operator.

In 1985 the Department of Energy acquired an additional existing cavern through a cavern exchange agreement with Union Texas Petroleum. The transaction involved a 3.5 acre exchange with no net change in Government-owned acreage.